

# Canada-wide Standards for Mercury Emissions from Coal-fired Electric Power Generation Plants

Presented to: Great Lakes Binational Toxics Strategy Mercury Work Group  
May 17, 2005

Shelly Bonte-Gelok  
Standards Development Branch  
Ontario Ministry of the Environment

*Protecting our environment.*



# Overview

## Background

- Mercury releases in Canada
- Deputy direction for the Canada-wide Standard (CWS) for the electric power generation (EPG) sector

## Data Collection

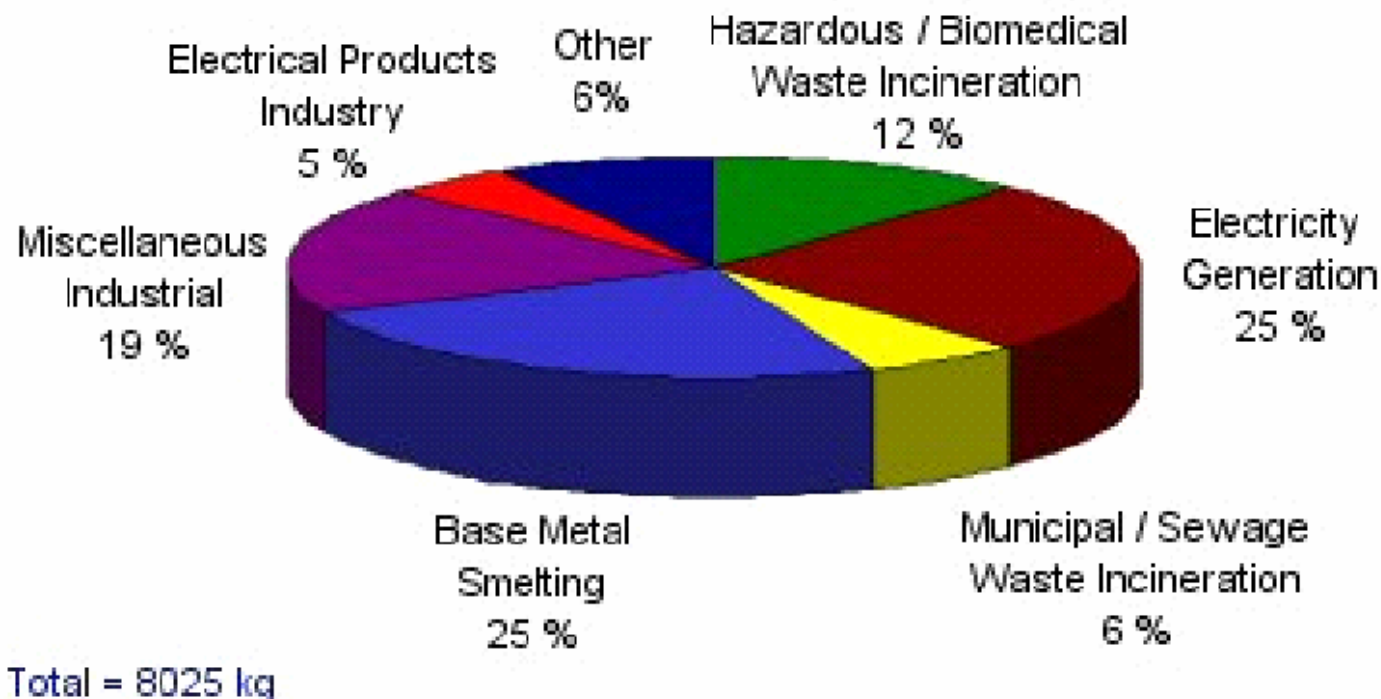
- Utility mercury monitoring program
- Canadian Electricity Association (CEA) mercury program
- Energy and Environmental Research Centre (EERC) report

## Status Canada-wide Standards for coal-fired plants

- Existing plants
- New plant standard
- Other items

# Background

## How much mercury is released ?



Coal-fired plants remain the largest unregulated source of mercury emissions in Canada

# Background

## Canada-wide Standards (CWS) for the EPG Sector

Canadian Council of Ministers of the Environment  
(CCME) Deputy Ministers Notice - June 2003

- Develop a CWS by 2005
- Explore national capture of 60-90% of mercury
- Emission reductions by 2010
- Align with the United States standards for mercury

# Data Collection

## Contributing activities

- Coal/emissions data for existing facilities for baseline
- Report on available technology and its outcomes
- Utility research and development

# Data Collection

## Utility Mercury Monitoring Program

Ontario Power Generation (OPG) committed to undertaking a two year mercury monitoring program at Atikokan, Thunder Bay, Nanticoke and Lambton generating stations – the program finished March 2005.

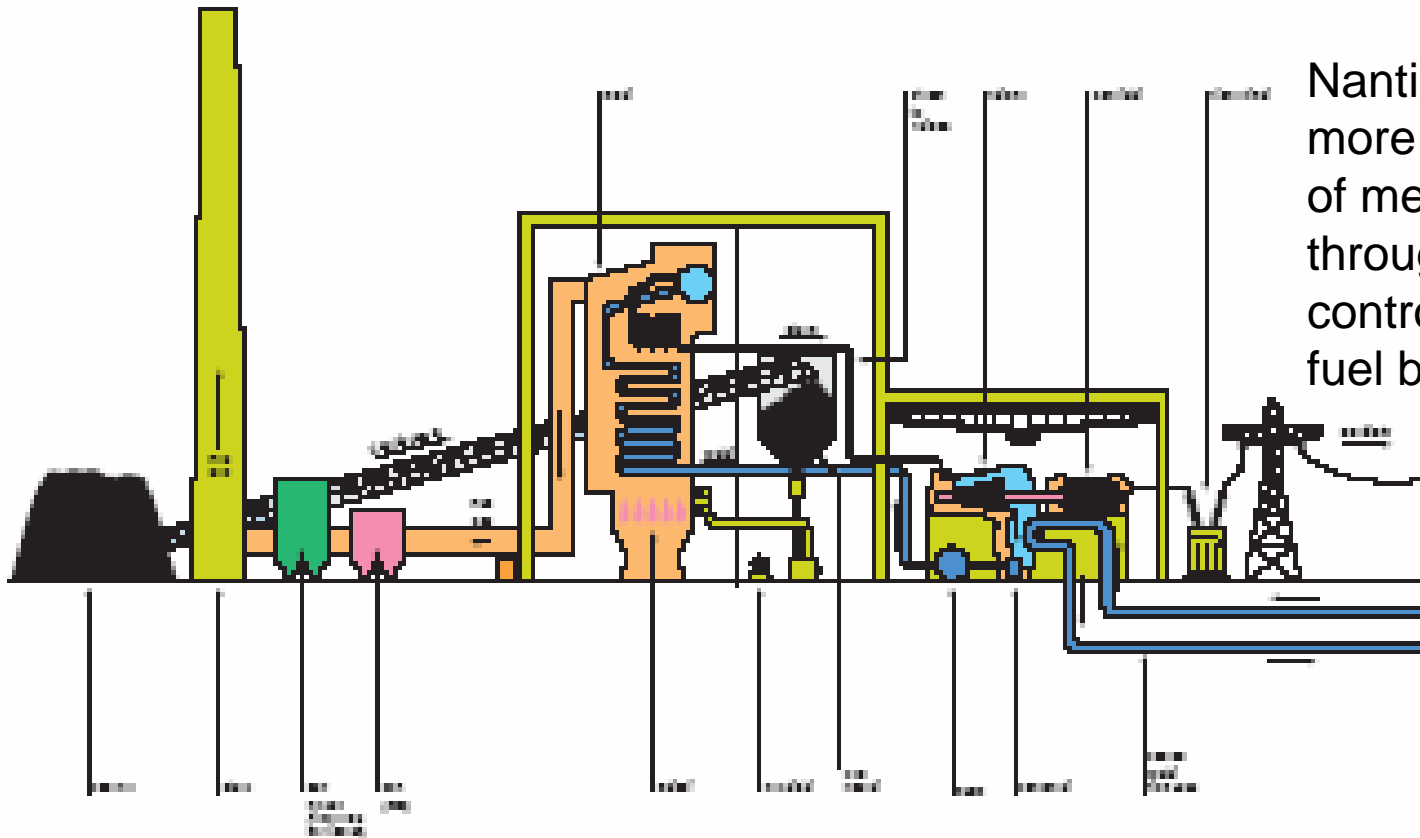
OPG collected information on mercury in coal, ash and performed stack testing.

Data summaries will be posted to the CCME website:

[www.ccme.ca](http://www.ccme.ca)

# Data Collection

## Utility Mercury Monitoring Program



Nanticoke is achieving more than 60% capture of mercury in coal burned through existing pollution control equipment and fuel blending

# Data Collection

## Canadian Electricity Association (CEA) Mercury Program

Data for facilities across Canada is currently available on the CEA website: [www.ceamercuryprogram.ca/index.html](http://www.ceamercuryprogram.ca/index.html)

The CEA has also contracted EERC to do a series of eight issues papers related to mercury and the EPG sector. The first 5 reports are available on the CEA website:

- [Sorbent Injection Technologies for Mercury Control](#)
- [Mercury Measurement](#)
- [Advanced & Developmental Hg Control Technologies](#)
- [Re-release of Mercury from Coal Combustion By-Products](#)
- [Mercury Fundamentals](#)



# Data Collection

## Energy & Environment Research Center (EERC) Report

The CCME contracted EERC to investigate mercury technologies performance/applicability for Canadian utilities.

The draft report stated that promising control technologies to reduce mercury emissions by 50% or more from existing plants include activated carbon injection upstream of a polishing fabric filter.

The final EERC report will be made publicly available on the CCME website in the later this year: [www.ccme.ca](http://www.ccme.ca)

# Status CWS

## Existing Coal-fired EPG Plants

- Series of provincial caps
- The CWS will consider recognition for early actions e.g.:
  - pollution prevention
  - early controls
- The federal government will also take action under the CWS to work internationally to reduce the global pool of mercury

# Status CWS

## Proposed New Plant Standards

- Consider the application of “best available technology economically achievable” to new plants
- New plants are not covered by the provincial caps for existing plants
- Consider emission rates (kg/MWh) and minimum percent capture forms
- Proposed new plant standards will be specific for each coal-type

# Status CWS

## Other CWS Requirements Proposed

### Implementation Plans

All jurisdictions will prepared implementation plans

### Reviews

The standard may include review (s)

### Monitoring

A monitoring protocol will be developed

### Reporting

Reports on progress and compliance will be done through CCME

# Next Steps

## ***Draft standard***

**March 2005:**

Draft CWS to Environmental Protection and Planning Committee (EPPC)

**April/May 2005:**

EPPC and Deputy Ministers Committee (DMC) consider draft standard

## ***Approval in principle of the draft standard***

**June 2005:**

DMC/Ministers “approval” of draft CWS for consultation (EBR proposal posting)

## ***Endorsement of the CWS***

**September/October 2005:** DC/EPPC/DMC review final standard

**November 2005:**

Council of Ministers (COM) “endorse” the standard at COM (EBR decision posting)

13

# THANK YOU